

# Package: tutorizeR (via r-universe)

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**Type** Package

**Title** Convert R Markdown or Quarto Content into Interactive Tutorials

**Version** 0.4.5

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**Description** Helps teachers convert existing '.Rmd' and '.qmd' teaching material into interactive tutorials for 'learnr' or 'quarto-live'. Conversion preserves narrative text, setup chunks, and major chunk options, supports teacher tags, and provides explicit validation and conversion reports. Output conventions follow 'learnr' as described by Aden-Buie et al. (2025) <[doi:10.32614/CRAN.package.learnr](https://doi.org/10.32614/CRAN.package.learnr)>, 'quarto-live' as described by Stagg (2024) <<https://tidyverse.org/blog/2024/10/quarto-live-0-1-1/>>, and R Markdown as described by Xie, Allaire and Golemund (2018, ISBN:9781138359338).

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**Encoding** UTF-8

**RoxygenNote** 7.3.3

**Depends** R (>= 4.0)

**Imports** cli, jsonlite, lifecycle, rlang, rmarkdown, rstudioapi, yaml

**Suggests** commonmark, covr, dplyr, ggplot2, knitr, learnr, lintr, miniUI, readr, shiny, testthat (>= 3.0.0)

**VignetteBuilder** knitr

**Config/testthat/edition** 3

**URL** <https://github.com/AurelienNicosiaULaval/tutorizeR>

**BugReports** <https://github.com/AurelienNicosiaULaval/tutorizeR/issues>

**NeedsCompilation** no

**Repository** <https://cran.r-universe.dev>

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---

check_tutorial	<i>Render a generated tutorial and return render status</i>
----------------	---

---

### Description

Render a generated tutorial and return render status

### Usage

```
check_tutorial(file, language = c("en", "fr"))
```

### Arguments

file	Path to tutorial ‘.Rmd’ to render.
language	Message language (“en” or “fr”).

**Value**

Invisibly, the render output path or the error object.

**Examples**

```
if (interactive()) {
  check_tutorial("analysis-tutorial.Rmd")
}
```

---

convert_folder	<i>Convert all '.Rmd'/'qmd' files in a folder</i>
----------------	---

---

**Description**

Converts every matching source file in 'dir', with resilient per-file error handling and a summary report.

**Usage**

```
convert_folder(
  dir = ".",
  pattern = "\\.(Rmd|qmd)$",
  recursive = FALSE,
  output_dir = NULL,
  format = c("learnr", "quarto-live"),
  assessment = c("code", "mcq", "both"),
  overwrite = FALSE,
  language = c("en", "fr"),
  seed = NULL,
  verbose = TRUE,
  question_bank = NULL,
  mcq_source = c("inline", "bank", "mixed"),
  lint_strict = FALSE
)
```

**Arguments**

dir	Folder containing source files.
pattern	Regex pattern used to select files.
recursive	Logical; recurse into subdirectories?
output_dir	Output directory for generated files.
format	Output format ("learnr" or "quarto-live").
assessment	Assessment mode ("code", "mcq", "both").
overwrite	Logical; overwrite existing outputs?
language	Message/template language ("en" or "fr").

seed	Optional integer seed injected in setup chunk.
verbose	Logical; print progress and summary?
question_bank	Optional path(s) or ‘tutorize_question_bank’ object.
mcq_source	MCQ generation source (“inline”, “bank”, “mixed”).
lint_strict	Logical; fail conversion when lint reports errors.

### Value

A ‘tutorize\_folder\_report’ object (invisibly).

### Examples

```
labs <- file.path(tempdir(), "labs")
out <- file.path(tempdir(), "tutorials")
dir.create(labs, recursive = TRUE, showWarnings = FALSE)
writeLines(
  c("---", "title: Demo", "---", "", "````{r}```", "1 + 1", "````"),
  file.path(labs, "demo.Rmd")
)
report <- convert_folder(labs, output_dir = out, recursive = TRUE, verbose = FALSE)
print(report)
```

---

convert\_to\_tutorial    *Backward-compatible wrapper for tutorial conversion*

---

### Description

‘convert\_to\_tutorial()’ is kept for compatibility with earlier versions. New code should use [tutorize()].

### Usage

```
convert_to_tutorial(
  input_file,
  output_file = NULL,
  assessment = c("code", "mcq", "both"),
  format = c("learnr", "quarto-live"),
  add_mcq = NULL,
  question_bank = NULL,
  mcq_source = c("inline", "bank", "mixed"),
  lint_strict = FALSE
)
```

**Arguments**

input_file	Path to source ‘.Rmd’ or ‘.qmd’ file.
output_file	Output path.
assessment	Assessment mode: “code”, “mcq”, or “both”.
format	Output format: “learnr” or “quarto-live”.
add_mcq	Deprecated. Use ‘assessment’ instead.
question_bank	Optional path(s) or ‘tutorize_question_bank’ object.
mcq_source	MCQ generation source: “inline”, “bank”, “mixed”.
lint_strict	Logical; fail conversion when lint reports errors.

**Value**

Invisibly, the generated output file path.

**Examples**

```
input <- tempfile(fileext = ".Rmd")
output <- tempfile(fileext = ".Rmd")
writeLines(c("---", "title: Demo", "---", "", "```\r", "1 + 1", "```\r"), input)
convert_to_tutorial(input, output_file = output)
```

---

export\_lms\_manifest     *Export a profile-aware LMS manifest*

---

**Description**

Export a profile-aware LMS manifest

**Usage**

```
export_lms_manifest(
  input,
  output_file = NULL,
  profile = c("generic", "canvas", "moodle"),
  include_solutions = TRUE,
  language = c("en", "fr")
)
```

**Arguments**

input	Source ‘.Rmd’/‘.qmd’ file.
output_file	Output path for the manifest file.
profile	Manifest profile (“generic”, “canvas”, “moodle”).
include_solutions	Logical; mark exercise solutions as available.
language	Manifest language (“en” or “fr”).

**Value**

A ‘tutorize\_lms\_manifest’ object.

---

```
export_tutorial_package
      Export a tutorial-ready package scaffold (opt-in)
```

---

**Description**

Export a tutorial-ready package scaffold (opt-in)

**Usage**

```
export_tutorial_package(
  input,
  path = NULL,
  package_name = NULL,
  overwrite = FALSE
)
```

**Arguments**

input	Source ‘.Rmd’/‘.qmd’ file.
path	Parent directory where the package directory will be created.
package_name	Optional package name. Derived from input by default.
overwrite	Logical; replace existing package directory if present.

**Value**

Invisibly returns the created package path.

---

```
launch_tutorizeR_addin
      RStudio Addin: Convert active document to tutorial
```

---

**Description**

Opens a lightweight prompt flow (format, assessment, output directory, overwrite) and converts the currently active file.

**Usage**

```
launch_tutorizeR_addin()
```

**Value**

Invisibly returns the ‘tutorize\_report’ object, or ‘NULL’ when cancelled.

---

`launch_tutorizeR_folder_addin`*RStudio Addin: Convert a folder to tutorials*

---

**Description**

Prompts for folder and conversion options, then converts all matching files.

**Usage**

```
launch_tutorizeR_folder_addin()
```

**Value**

Invisibly returns a 'tutorize\_folder\_report' object, or 'NULL' when cancelled.

---

`launch_tutorizeR_preview_addin`*RStudio Addin: Preview conversion with lint and diff*

---

**Description**

Opens a gadget with Source, Output, Diff, Lint and Logs tabs.

**Usage**

```
launch_tutorizeR_preview_addin()
```

**Value**

Invisibly returns a 'tutorize\_report' object or 'NULL'.

---

lint_source	<i>Lint source pedagogical constraints before conversion</i>
-------------	--

---

**Description**

Lint source pedagogical constraints before conversion

**Usage**

```
lint_source(  
  input,  
  question_bank = NULL,  
  language = c("en", "fr"),  
  strict = FALSE  
)
```

**Arguments**

input	Source '.Rmd' or '.qmd' file.
question_bank	Optional 'tutorize_question_bank' object.
language	Message language ("en" or "fr").
strict	Logical; if 'TRUE', stop when lint errors are present.

**Value**

A 'tutorize\_lint\_report' object.

---

load_question_bank	<i>Load a reusable MCQ question bank from YAML/JSON files</i>
--------------------	---

---

**Description**

Load a reusable MCQ question bank from YAML/JSON files

**Usage**

```
load_question_bank(  
  path,  
  recursive = TRUE,  
  format = c("auto", "yaml", "json"),  
  strict = TRUE,  
  language = c("en", "fr")  
)
```

**Arguments**

path	File or directory path(s) containing question bank files.
recursive	Logical; recurse into subdirectories when 'path' is a directory.
format	Input format: "auto", "yaml", or "json".
strict	Logical; if 'TRUE', validation errors stop execution.
language	Language for validation messages ("en" or "fr").

**Value**

A 'tutorize\_question\_bank' object.

---

`print.tutorize_folder_report`  
*Print method for folder conversion reports*

---

**Description**

Print method for folder conversion reports

**Usage**

```
## S3 method for class 'tutorize_folder_report'  
print(x, ...)
```

**Arguments**

x	A 'tutorize_folder_report' object.
...	Unused.

**Value**

'x', invisibly.

---

```
print.tutorize_lint_report
```

*Print method for lint reports*

---

**Description**

Print method for lint reports

**Usage**

```
## S3 method for class 'tutorize_lint_report'  
print(x, ...)
```

**Arguments**

x	A 'tutorize_lint_report' object.
...	Unused.

**Value**

'x', invisibly.

---

```
print.tutorize_lms_manifest
```

*Print method for LMS manifest exports*

---

**Description**

Print method for LMS manifest exports

**Usage**

```
## S3 method for class 'tutorize_lms_manifest'  
print(x, ...)
```

**Arguments**

x	A 'tutorize_lms_manifest' object.
...	Unused.

**Value**

'x', invisibly.

---

print.tutorize\_report *Print method for tutorize conversion reports*

---

**Description**

Print method for tutorize conversion reports

**Usage**

```
## S3 method for class 'tutorize_report'
print(x, ...)
```

**Arguments**

x	A 'tutorize_report' object.
...	Unused.

**Value**

'x', invisibly.

---

tr	<i>Translate a tutorizeR message key</i>
----	--

---

**Description**

Looks up a message key in language dictionaries and interpolates named placeholders (for example, "{name}").

**Usage**

```
tr(key, ..., language = NULL)
```

**Arguments**

key	Dot-separated translation key (e.g. "messages.render_ok").
...	Named interpolation values.
language	Optional language ("en" or "fr").

**Value**

A translated character string.

---

tutorize

---

*Convert a source document into an interactive tutorial*


---

### Description

`tutorize()` is the canonical high-level API. It converts an existing `.Rmd` or `.qmd` source document into a tutorial-ready document for `learnr` or `quarto-live`.

### Usage

```
tutorize(
  input,
  output_dir = NULL,
  format = c("learnr", "quarto-live"),
  assessment = c("code", "mcq", "both"),
  overwrite = FALSE,
  language = c("en", "fr"),
  seed = NULL,
  verbose = TRUE,
  output_file = NULL,
  question_bank = NULL,
  mcq_source = c("inline", "bank", "mixed"),
  lint_strict = FALSE
)
```

### Arguments

<code>input</code>	Path to source <code>.Rmd</code> or <code>.qmd</code> file.
<code>output_dir</code>	Output directory. Required unless <code>output_file</code> is supplied.
<code>format</code>	Output format: <code>"learnr"</code> (default) or <code>"quarto-live"</code> .
<code>assessment</code>	Assessment mode: <code>"code"</code> , <code>"mcq"</code> , or <code>"both"</code> .
<code>overwrite</code>	Logical; overwrite existing output file?
<code>language</code>	Message/template language: <code>"en"</code> (default) or <code>"fr"</code> .
<code>seed</code>	Optional integer seed injected into setup chunk.
<code>verbose</code>	Logical; show progress and diagnostic messages?
<code>output_file</code>	Optional explicit output file path. Useful for wrappers.
<code>question_bank</code>	Optional path(s) or <code>tutorize_question_bank</code> object.
<code>mcq_source</code>	MCQ generation source: <code>"inline"</code> , <code>"bank"</code> , <code>"mixed"</code> .
<code>lint_strict</code>	Logical; fail conversion when lint reports errors.

### Value

A `tutorize_report` object (invisibly).

## Examples

```
input <- tempfile(fileext = ".qmd")
writeLines(c("---", "title: Demo", "---", "", "```\r", "1 + 1", "```\n"), input)
rep <- tutorize(
  input,
  output_dir = tempdir(),
  format = "learnr",
  assessment = "both",
  overwrite = TRUE,
  verbose = FALSE
)
print(rep)
```

---

validate\_input

*Validate tutorizeR input arguments*

---

## Description

Performs defensive checks for file path, format, assessment, and extension.

## Usage

```
validate_input(
  input,
  format = c("learnr", "quarto-live"),
  assessment = c("code", "mcq", "both"),
  language = c("en", "fr")
)
```

## Arguments

input	Path to source ‘.Rmd’ or ‘.qmd’ document.
format	Target output format (“learnr” or “quarto-live”).
assessment	Assessment mode (“code”, “mcq”, or “both”).
language	Language for validation messages (“en” or “fr”).

## Value

Invisibly returns ‘TRUE’ if validation succeeds.

---

validate_output	<i>Validate output path and overwrite strategy</i>
-----------------	--

---

**Description**

Validate output path and overwrite strategy

**Usage**

```
validate_output(
  output_file,
  input_file,
  overwrite = FALSE,
  language = c("en", "fr")
)
```

**Arguments**

output_file	Destination output file path.
input_file	Source file path.
overwrite	Logical; allow replacing an existing output.
language	Language for validation messages ("en" or "fr").

**Value**

Invisibly returns 'TRUE' if validation succeeds.

---

validate_question_bank	<i>Validate a 'tutorize_question_bank' object</i>
------------------------	---

---

**Description**

Validate a 'tutorize\_question\_bank' object

**Usage**

```
validate_question_bank(bank, strict = TRUE, language = c("en", "fr"))
```

**Arguments**

bank	A question bank object from [load_question_bank()].
strict	Logical; if 'TRUE', stop on validation errors.
language	Language for validation messages ("en" or "fr").

**Value**

A 'tutorize\_report' object.

---

write\_tutorize\_report *Write a conversion report to JSON or YAML*

---

**Description**

Write a conversion report to JSON or YAML

**Usage**

```
write_tutorize_report(report, file, format = c("json", "yaml"), pretty = TRUE)
```

**Arguments**

report	A 'tutorize_report' object.
file	Output file path.
format	Output serialization format ("json" or "yaml").
pretty	Logical; pretty-print JSON output.

**Value**

Invisibly returns 'file'.

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